

Page 1

Cut Blanks to 37.5" by 43"

x2 _____ 15/11/03

Work Order ID 137855

137855

Page 2

Tuesday, October 13, 2015 1:08:42 PM

Item ID: D412-711-101 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Replacement Vertical Reference Window
Start Date: 10/13/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 10/13/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							DAS 07 9-89
130	THERMOFORMING MACHINE					x2			15/11/03
Thermoform	Memo	0.02							
Thermoforming Machine	Thermoform as per Dwg. D412-711-101 using DT 9640 and Folio FTA 077 Dwg. Rev. <u>B.</u> Folio Rev. <u>C.</u> Visually inspect for proper formation and clarity Visually and inspect magic eye Verified by: <u>Wu</u>								
160		0.00							DAS 07 9-89
160	HAND FINISHING THERMOFORMING					x2			15/11/03
HandThermo	Memo	0.04							
Hand Finishing Thermoforming	1) Trim off excess flange material blemishes 2) Buff out any light scratches or 3) Etch part number and batch number								

Work Order ID 137855

Tuesday, October 13, 2015 1:08:42 PM

137855

Page 3

Item ID: D412-711-101 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Replacement Vertical Reference Window
Start Date: 10/13/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 10/13/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamps
170	QC2- Inspect parts off machine FAI/FAIB	0.00							07 9-89

170

QC

Quality Control

Memo

1) Visually inspect for clarity, and proper formation.

0.00

x2

15/11/03

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Quality Control

Memo

1) Visually inspect for clarity, and proper formation.

0.00

2

EB

15-11-04

185

QC4- 100% Inspect kits for completeness

0.00

185

QC

Quality Control

Memo

0.00

2X

DAS
28
9-89

NOV 04 2015

Work Order ID 137855

Tuesday, October 13, 2015 1:08:42 PM

137855

Page 4

Item ID: D412-711-101 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Replacement Vertical Reference Window
Start Date: 10/13/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 10/13/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Identify as per dwg & Stock Location: _____	0.00							
190									
Packaging	Memo	0.00				2x	DAS 28 9-89	NOV 04 2015	
Packaging	Location: FG099 (1x)								
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.00							
Quality Control									

ML3 NOV 04 2015

Picklist Print

Tuesday, October 13, 2015 1:08:45 PM

Work Order ID: 137855

137855

Parent Item: D412-711-101

D412-711-101

Parent Item Name: Replacement Vertical Reference Window

Start Date: 10/13/2015

Required Date: 10/13/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A New Issue 06-02-01 JLM
Manufacture in-house 10/06/28 DL

IPP Rev. B.

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MACRLICS.236		Purchased	No				sf	302.7830		42.66667			DAS 07 9-89

MACRLICS 236

Plexiglass G 60" x 96"x .236"

Location

Loc Qty

Loc Code

therm

302.78296

M129447

0.59296

M131524

153

M132743

149.19

M133439.

15/11/03

22 sq ft.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

DART AEROSPACE LTD		Work Order: 137855
Description: Replacement Window		Part Number: D412-711-101
Inspection Dwg: D412-711-101	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than <u>12/16"</u>				
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

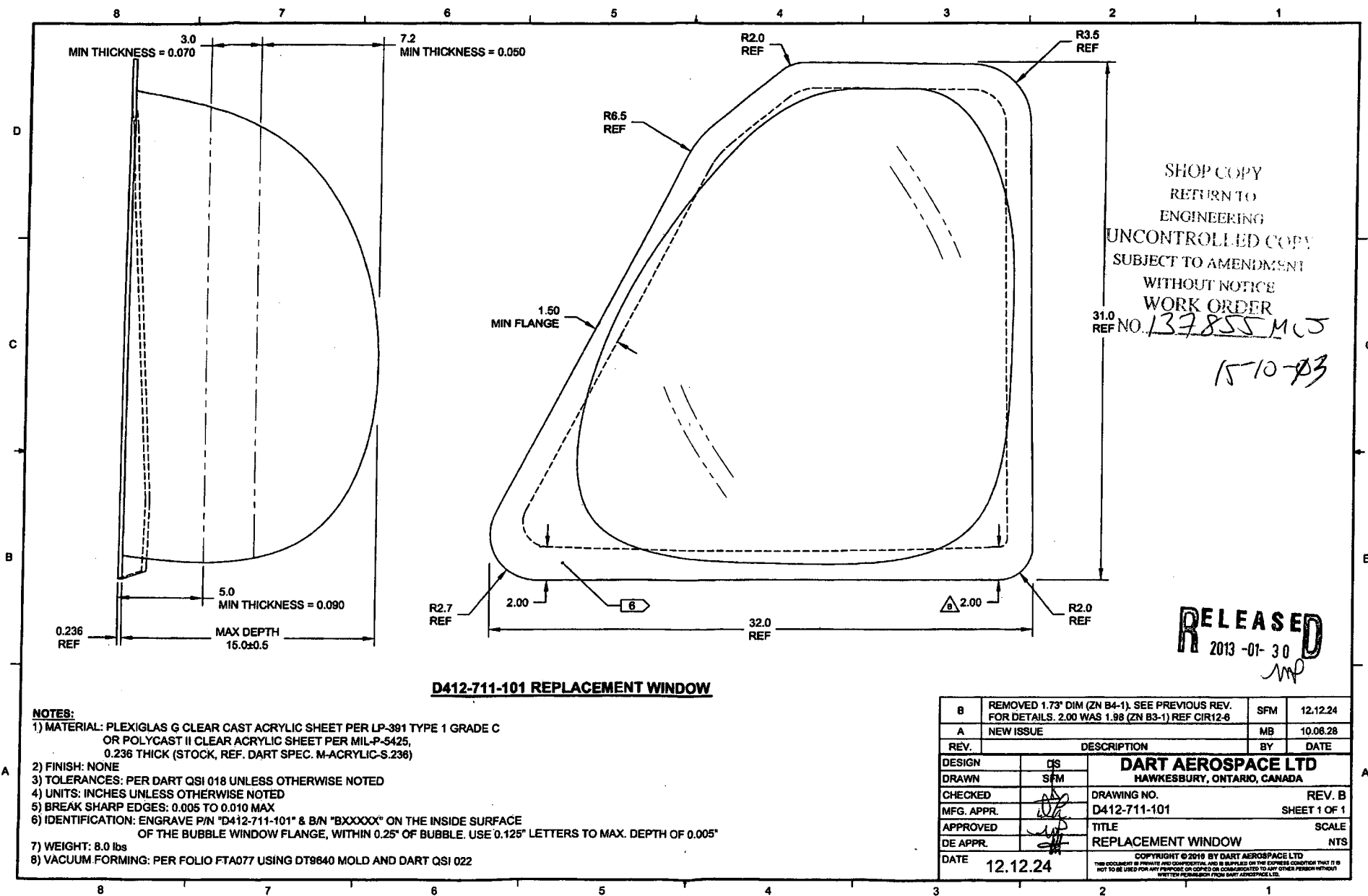
Measured by: DAS 07 9-89	Date: 15/11/03
---	-----------------------

TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.00	+/-0.030	2.00"	✓			
1.98- <u>N/A</u>	+/-0.030	—				
1.50	Min	1.55"	✓			
0.090	Min	0.091"	✓			
0.070	Min	0.083"	✓			
0.050	Min	0.064"	✓			
15.0	+/-0.5	15.0"	✓			

Measured by: DAS 07 9-89	Date: 15/11/03
Audited by:	Date: 15/11/04
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
B	10.10.08	New Issue	KJ	
C	13.06.03	Dimensions updated per Dwg Rev B	KJ	



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 137855 MJS
15-10-03

RELEASED
2013-01-30

D412-711-101 REPLACEMENT WINDOW

- NOTES:**
- 1) MATERIAL: PLEXIGLAS G CLEAR CAST ACRYLIC SHEET PER LP-391 TYPE 1 GRADE C OR POLYCAST II CLEAR ACRYLIC SHEET PER MIL-P-5425, 0.236 THICK (STOCK, REF. DART SPEC. M-ACRYLIC-S.236)
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: ENGRAVE P/N "D412-711-101" & B/N "BXXXXX" ON THE INSIDE SURFACE OF THE BUBBLE WINDOW FLANGE, WITHIN 0.25" OF BUBBLE. USE 0.125" LETTERS TO MAX. DEPTH OF 0.005"
 - 7) WEIGHT: 8.0 lbs
 - 8) VACUUM FORMING: PER FOLIO FTA077 USING DT9640 MOLD AND DART QSI 022

8	REMOVED 1.73" DIM (ZN B4-1). SEE PREVIOUS REV. FOR DETAILS. 2.00 WAS 1.98 (ZN B3-1) REF CIR12-6	SFM	12.12.24
A	NEW ISSUE	MB	10.08.28
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	SFM		
CHECKED	DS	DRAWING NO.	REV. B
MFG. APPR.	DS	D412-711-101	SHEET 1 OF 1
APPROVED	DS	TITLE	SCALE
DE APPR.	DS	REPLACEMENT WINDOW	NTS
DATE	12.12.24	COPYRIGHT © 2018 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	